

Two new Syrphidae (Diptera) from Eastern North America.

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(Plate XVI).

Cinxia* carolinensis new species (Plate XVI, figs. A, B, C, D).

At once distinguished from the described North American species in lacking the black facial stripe and in having but a single fascia, or pair of spots, on the abdomen.

♂. Length 10 to 11 mm. Vertex black, but little shining, with dusky yellow pile much lighter on the occiput. The eyes contiguous or nearly so for about the length of the vertical triangle. Frontal triangle densely whitish yellow pollinose, except for a shining black lunule above the base of the antennae and a very slender, median, impressed line. In some lights the blackish ground color shows through, especially next the eyes. The front covered with very delicate, silvery pile which continues down the sides of the face, gradually thinning on anterior orbits to the lower corner of the eye. Face yellow; whitish yellow pollinose like the frons, except for a broad glabrous band over the tubercle, but not reaching the base of the antennae, which is shining waxy yellow. Cheeks (jowls) brownish black with moderate pale pile and a broad contiguous band in front of the jowls from eye to oral margin deep shining black, bare. Anterior mouth edge narrowly blackened.

Face in profile (Plate XVI, Fig. B) much produced downward and forward, more than usually concave below the antennae and with a prominent tubercle about equalling the frontal prominence; abruptly constricted below the tubercle and thence straight to oral margin. Lower mouth edge convex, forming with the plane of the occiput an angle of about 130°. Posterior orbits somewhat inflated below, whitish pollinose, and with delicate pale pile. Proboscis and palpi entirely brownish black, about as long as the depth of the eye.

Antennae brownish yellow, the first two joints darker, the third joint subquadrate, with angles much rounded, a fifth deeper than its length on the inner side beyond second joint. The arista two and one-half times this length, basal, reddish yellow, plumose, with about a dozen rays on the upper side not extending to the tip and two-thirds as many below, the latter wanting on the basal third and at the tip.

Mesonotum moderately shining bronze black, with thick but delicate yellow pile, humeri whitish pollinose. The scutellum obscure reddish brown to black with similar pile. Pleurae shining black with thinner pile. A small indistinct brownish yellow spot on the upper sterno-

**Cinxia* Meigen (1800)—*Scricomyia* Meigen (1803).

pleura and another above the middle coxa on the pteropleura. Plumula and tegulae white, the latter with yellowish pile, halteres yellow.

Abdomen (Plate XVI, Fig. C) about one-fifth longer, and the second and third segments broader, than the thorax, broadest at end of second segment; black, moderately shining, rather strongly arched, with moderate pile, which is black on the posterior margin of the second and on the disk of the third and fourth segments, elsewhere yellowish, longer on the venter, on the genitalia and at the sides of the second segment where it is also denser, but in no place obscuring the ground color. An interrupted yellow fascia on the anterior half of the second segment which takes the form of two narrow, elongate, slightly oblique spots, a little less than one-fourth the width of the segment and attenuated somewhat toward either end; interrupted by more than twice their width and separated from the lateral margin by one-half more than their width. The black of the segment contiguous to these spots is opaque. Elsewhere the abdomen is immaculate except for a slight margin of yellow on some of the genital plates posterior to the fourth segment. Venter with yellow as follows: posterior angles and narrow posterior margin of first segment, the second segment except a median black spot, and a stripe on the posterior margin of the third segment. Elsewhere, including the genitalia, black, shining.

Wings (Plate XVI, Fig. A) on the costal third brownish, clouded, occupying most of the costal, subcostal and marginal cells. Veins brownish throughout. Anterior cross-vein four-ninths the distance from base of discal cell, the third longitudinal vein broadly but considerably bent into the first posterior cell, the latter pediform.

All the femora slightly thickened, hind pair very slightly curved; including the coxae, reddish to blackish brown, the tips yellow. Tibiae yellowish, the anterior ones slightly, the hind pair much infuscated in the middle. Tarsi yellow, the last two joints brownish. Pile chiefly pale yellow, longer on the femora.

Described from two males: The *type* collected by the writer at Raleigh, North Carolina, in mid-April, 1914, about blossoming pear; in the author's collection. *Paratype* (without head) collected by Mr. Franklin Sherman, Jr., at Raleigh, North Carolina, in late March, 1908; in the collection of the North Carolina Department of Agriculture.

Sphaerophoria cleoae new species (Plate XVI, figs. E, F).

♀. Length 8 mm. Vertex deep blue black, moderately shining. The black encroaches to a variable extent on the frons, particularly as a median stripe narrowing toward, and not reaching more than half-way to, the base of the antennae, or sometimes reaching nearly to the latter

and widening slightly to form a biconcave arch above their bases. The black also projects on each side as slight points along the eyes. Remainder of the frons, the face and cheeks entirely wax yellow, shining, or, rarely, the cheeks and jowls slightly infuscated or even entirely blackened. The anterior mouth edge sometimes narrowly blackish and more or less infuscation on the facial tubercle but not forming a definite stripe. Posterior orbits densely pollinose and pilose; with somewhat flattened silvery white pile on lower half, infuscated and with delicate brownish yellow pile above. Pile of vertex black, that of frons mostly pale yellow, delicate. The face nearly bare a few very short delicate pale yellow hairs. Cheeks long yellow pilose. Antennae of the same color as the face, the third segment rounded, about as deep as long, the upper and distal parts more or less infuscated; the first and second segments entirely pale yellow with minute stiff black hairs especially on the upper side. Arista brownish, bare, somewhat thickened on the basal third.

Face in profile (Plate XVI, Fig. F) prominent, slightly concave from antennae to tubercle and again slightly constricted before the mouth edge. On lower part produced forward about half the width of the eye. Anterior mouth edge not equaling the tubercle.

Thorax brownish black, moderately shining, with two faintly whitish pollinose, narrowly separated stripes, obsolete behind. The lateral margins broadly and brightly yellow on humeri and to the suture, thence a little less brightly but still distinctly yellowish to the scutellum. Pleurae with the usual distinct yellowish spots on the prothorax, meso- and meta-pleurae and on the upper parts of sterno- and ptero-pleurae. Scutellum, plumula, squamae and halteres entirely yellowish. Pile of the dorsum yellow, fine, moderately abundant; the lateral margins, the scutellum, and more or less of pleurae with delicate pale yellow pile.

Abdomen black, with doubly interrupted yellow fasciae, moderately shining, the lateral margins continuously yellow. First segment metallic shining, the lateral margins broadly and a very slender line on the anterior margin yellow. *Second, third and fourth segments each with an arcuate, yellow crossband, which is completely or nearly interrupted on each side about a third of the way from the lateral margin to the middle line.* The lateral parts of the arcuate bands consist of more or less prominent angular projections antero-medial from the lateral margin. Fifth and sixth segments each with an interrupted, arcuate yellow band, the halves resolved into somewhat hammerlike yellowish spots. Sometimes these segments all yellowish except a median spot and one on each side blackish. Narrow posterior margins of third to fifth segments yellowish. Remainder of abdomen and the venter all yellowish.

Legs including the coxae and trochanters pale yellowish with fine black hairs on femora and hind tibiae and tarsi; on the coxae long pale

yellowish. Tarsi usually slightly infuscated, rarely quite black. Wings transparent, the stigma alone slightly yellowish; veins brownish.

Described from fifteen females taken at Orono, Maine, chiefly about blossoming mustard. Seven paratypes August 11, 1915; the *type* August 16, 1915, three paratypes August 19, 1915, three paratypes August 24, 1915, and one paratype July 12, 1916. Named in honor of Mrs. Cleo Fouch Metcalf, who collected the first and the type specimens. The type is in the collection of the writer, paratypes in the collections of the Maine Agriculture Experiment Station and the Ohio State University.

EXPLANATION OF PLATE XVI.

Cinxia carolinensis n. sp. ♂.

Fig. A—Wing, X 8.

Fig. B—Head, lateral view, X 8.

Fig. C—Scutellum and abdomen, dorsal view, X 8.

Fig. D—Genitalia, ventral view, X 7.

Sphaerophoria cleoae n. sp. ♀.

Fig. E—Dorsal view, X 5.5.

Fig. F—Head, lateral view, X 8.

Lycaena lygdamus Doubleday and its Races with a Description of a New One (Lep.).

By HENRY SKINNER.

So far as I am aware the typical form of this species is very rare in collections. We have two specimens collected by James Ridings in Hampshire County, Virginia (now West Virginia) in 1857. Last spring, Morgan Hebard presented a fine pair to the Academy, taken at Hot Springs, Virginia, May 7th, at an elevation of 2,500 feet. These specimens agree perfectly with the excellent description of the species by Doubleday. The type locality of *lygdamus* was, in all probability, Jacksonborough, Screven County, Georgia. This county is on the extreme eastern border of the State about the middle line. They were collected by Abbot and we are indebted to Dr. S. H. Scudder for information in regard to this famous old collector and artist.* Abbot lived in Jacksonborough, but the town no longer

*Butts. Eastern U. S. & Can. 1, p. 651.